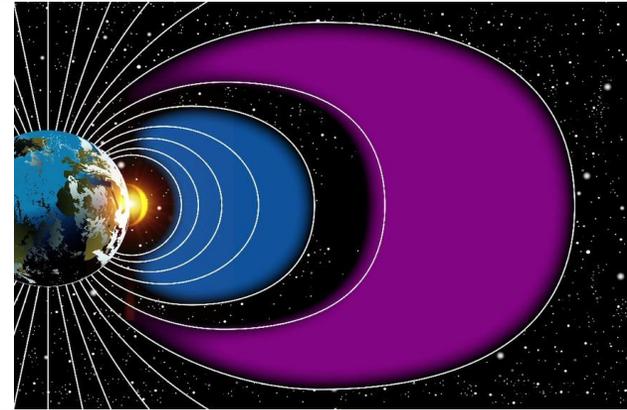
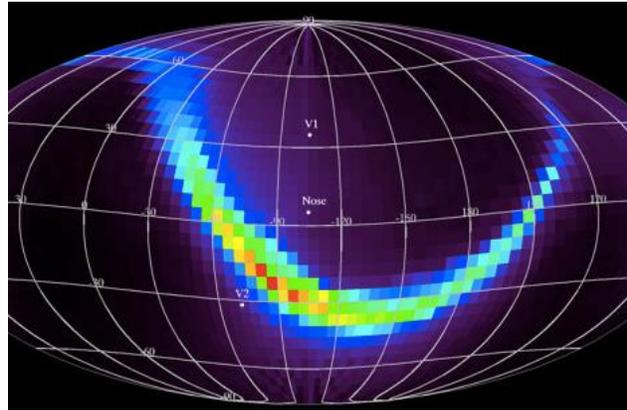


SCIENCE

DRAFT

National Aeronautics and
Space Administration



Geospace Dynamics Constellation Science and Technology Definition Team Update

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Heliophysics Division

December 19, 2018

Introduction

- The Decadal Survey recommended GDC as the LWS strategic mission.
- NASA formed the STDT to update the science objectives from the Decadal Survey, produce a compelling science investigation, and to develop potential mission implementations.
 - The STDT is chartered as a subcommittee for the Heliophysics Advisory Committee (HPAC). The STDT report will come to HPAC, who will then make a recommendation to NASA.
 - The scope of the STDT work has been modified since the last HPAC meeting. (To be discussed in a later slide.)
- The STDT has held three in-person meetings, and the public has been invited to virtually attend via WebEx. Everything presented to the STDT at those meetings has been made available to the public via HPD's GDC STDT webpage.

Timeline

- Aug. 2017
- Oct. 2017
- May 2018
- July 2018
- Nov. 2018
- **Dec. 19, 2018**
- Sp./Su. 2018 (exp.)

Call for Letters of Application published

Request for Information released

STDT first in-person meeting

STDT second in-person meeting

STDT third in-person meeting

STDT mid-term report to HPAC

STDT report delivered to HPAC

STDT disbanded

HPAC delivers recommendation to NASA

Membership

- **Aaron Ridley (co-chair). Univ of Mich.**
- Brian Anderson. *JHU/APL*
- Stuart Bale. *Univ. of Calif., Berkeley*
- Rebecca Bishop. *Aerospace Corp.*
- Cynthia Cattell. *Univ. of Minn.*
- James Clemmons. *Univ. of New Hampshire*
- Hyunju Connor. *Univ. of Alaska, Fairbanks*
- Lynette Gelinas. *Aerospace Corp.*
- **Allison Jaynes (co-chair). Univ. of Iowa**
- Larisa Goncharenko (HPAC). *MIT*
- Roderick Heelis. *Univ. of Texas, Dallas*
- Gang Lu. *NCAR*
- Tomoko Matsuo (HPAC). *Univ. of Colo.*
- Martin Mlynczak. *NASA LaRC*
- Robert Pfaff. *NASA GSFC*
- Cora Randall (HPAC). *Univ. of Colo.*
- Eftyhia Zesta. *NASA GSFC*

Scope of Work

- When NASA planned and began implementing the STDT as defined by the Terms of Reference, conflicts arose related to the process it is operating within.
- NASA rescoped the STDT work to ensure that the final report is scientifically and programmatically valuable to NASA and the community.
- The STDT will produce a compelling mission concept, but the report will not contain the same content seen in previous reports.
 - Focus on the science objectives and the geophysical parameters that must be acquired (regardless of how that is done)
 - No particular mission implementations
 - No discussion of topics leading to instrumentation, anything involved with procurement activities, or any other related topics

Scope of Work

- “Define a compelling and executable mission concept for GDC...” [TOR]
 - + - conduct a mission concept study
 - + - define design reference mission(s) for GDC
 - assessment of the science rationale for the mission
 - the provision of science parameters
 - investigation approaches
 - key mission parameters
 - any other scientific studies needed

Scope of Work

- “Define a compelling and executable mission concept for GDC...” [TOR]
 - + - conduct a mission concept study
 - + ~~- define design reference mission(s) for GDC~~
 - assessment of the science rationale for the mission
 - the provision of science parameters
 - investigation approaches
 - key mission parameters
 - ~~- any other scientific studies needed~~
 - *requirements for and constraints on multiple potential GDC constellations*
 - *exploration of parameter space, no particular implementation given or recommendations made*

Questions?